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1984-85 ANNUAL REPORT

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ANIMAL INDUSTRY DIVISION

Alberta
AGRICULTURE

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ANNUAL REPORT

ANIMAL INDUSTRY DIVISION

ALBERTA AGRICULTURE

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ANIMAL INDUSTRY DIVISION

The Division's five branches responded to the needs of producers and agribusiness concerned with production and marketing of meat producing animals and poultry.

Activities of the Division included extending technical information to producers and agribusiness, solving production problems, liaising with other segments of government to improve service to producers, administering and updating acts and regulations in concert with industry requirements, as well as advising on and participating in pertinent applied research projects.

The Division was reduced in manpower by the deletion of 7 positions. The Poultry Research Station was closed as of March 31, 1985.

BEEF CATTLE AND SHEEP BRANCH

I. INDUSTRY OVERVIEW

A. Beef Cattle

Liquidation of the beef breeding herd in Alberta continued at an accelerated pace in 1985. The total number of beef cows and heifers kept for breeding was estimated at 1.35 million on January 1, 1985, down 5.6% from the previous year. This herd reduction in 1984 compared with reductions of 3.1% in 1983 and 5.4% in 1982. The Canadian beef breeding herd declined by 5.0% in 1984.

Two factors played a major part in the continued beef herd reduction. Farm net incomes continued to fall for the fourth consecutive year. Many of Alberta's beef herds are part of a mixed grain - livestock operation. In a period of cash shortage, the beef breeding herd is a source of easily liquidated assets which can be sacrificed to support the family income and the financial commitments of the farm. A severe drought which affected much of southern Alberta in 1984 was the second factor which played a major part in continued beef herd liquidations. Many ranges and pastures were exhausted by mid summer. A mid-October snowfall halted harvest operations and further aggravated shortages of winter feed supplies. The cost of supplemental feed therefore increased because of the drought and early winter. Many owners chose to dispose of part or all of their herd rather than incur extraordinarily high per cow costs for winter maintenance, with limited prospects that the costs could be recovered from the 1985 calf crop.

For most of 1984, slaughter cattle prices in Alberta remained above those of 1983. Calgary prices peaked at 80¢ per pound live weight in late April and then declined gradually to 71¢ by October 1. By December, finished steers were again selling in the range of 77¢ to 79¢ per pound.

Average feeder steer calf prices peaked at 90¢ per pound in Edmonton in February of 1984, while the low for the year of 80¢ was paid in early April. For the remainder of the year, average feeder steer calves sold in the range of 80¢ - 87¢ per pound live.

The cost of feed in 1984 increased dramatically. Feed barley prices rose to the range of $130 - $140 per tonne compared to prices of $77 - $110 per tonne in the previous year. The price offered for good quality hay and other forage, especially in the southern part of the province affected by drought, rose to well over $120 per tonne compared to $75 per tonne the previous year.

Progress toward a red meat income stabilization program was delayed by a change of government at the Federal level in September of 1984 but discussions are continuing.

Cattle feeders and other feed grain users in Alberta continue to press the case that the benefit from the Crowsnest Pass Agreement should be paid directly to the producer; so that feed grain prices will reflect the local cost of production without a bias added for part of the transportation costs to tidewater.

B. Sheep

The Canadian sheep and lamb numbers were estimated at 791,000 July 1, 1984, down 2% from 809,000 a year previous (Table 1). Sheep one year of age and over decreased by 3% and lambs under one year old decreased by 1%.

Table 1. Sheep: Number on Farms in Alberta

July 1, 1983 and 1984

	Total Sheep and Lambs (1000's head)		
	1983	1984	1984/1983 Percent
Alberta	197.0	190.0	96
Eastern Canada	445.0	436.8	98
Western Canada	364.0	354.0	97
CANADA	809.0	790.8	98

Source: Statistics Canada Quarterly Report on Livestock Surveys

Alberta's sheep population also decreased. The total sheep and lamb numbers, July 1, 1984 were 190,000, down 4% from July 1, 1983. The 1983 Statistics Canada report recorded Alberta total sheep and lamb numbers at 197,000. Sheep one year old and older, usually considered an estimate of breeding males and females, was 98,000, July 1, 1984, down 4% from the previous year.

Alberta's slaughter at federally and provincially inspected sheep and lamb plants in 1984 was 111,577 head, up from 93,622 in 1983, and higher than any other province in Canada. Lambco, the federally inspected lamb plant at Innisfail, accounted for all but a small fraction of the Alberta kill making it easily the largest lamb slaughterer in Canada.

Imports of dressed lamb and mutton into Canada in 1984 decreased by 26% to 20.9 million pounds compared to the 1983 level of 27.8 million pounds.

Imports of slaughter sheep and lamb from the United States into Alberta increased sharply to 22,634 head from 11,778 head in 1983. Exports of feeder sheep and lambs from Alberta to the United States were 3,808 head, up from 49 the year before.

The top price paid for quality shrunk lambs, weighing between 95 - 110 lbs at Lambco was generally above 1983 prices ranging from $72.67 - 75.34 per cwt for 1984 as opposed to $64.87 - 66.87 for the previous year.

C. Animal Reproduction

The Artificial Insemination industry in Canada continues to be healthy although total cows bred by A.I. in Alberta in 1984 showed a slight decline. Approximately 45 percent of the dairy cattle and 4 percent of the beef cattle were bred by A.I. in Alberta.

Canadian exports of semen in 1984 accounted for $14.6 million in sales, up 13.9% over 1983. Alberta semen exports were $2.19 million in 1984 with the beef breeds accounting for most of the sales.

Alberta embryo transfer businesses continue to be leaders in Canada. Approximately 7,000 of the Canadian total of 22,000 embryos were transferred in Alberta. Most of these transfers were in the beef breeds with more interest now being shown by dairy cattle breeders. The outlook for embryo transfer remains bright on both the domestic and international market. There is an increase in inquiries on exporting embryos in lieu of live animals on foreign markets.

The number of cattle inseminated by licenced A.I. Technicians continued to decline as more services are being provided by owner-inseminators (table below).

Table 2. DAIRY AND BEEF COWS BRED ARTIFICIALLY BY LICENSED INSEMINATORS IN ALBERTA

Year	No. of Dairy Cows	Dairy Cows Bred		No. of Beef Cows	Beef Cows Bred	
		No.	%		No.	%
1979	140,000	27,804	19.9	1,380,000	15,516	1.1
1980	140,000	23,541	16.8	1,515,000	12,931	0.8
1981	158,000	18,995	12.0	1,385,000	8,920	0.6
1982	160,000	16,015	10.0	1,310,000	9,285	0.7
1983	157,000	10,727	6.8	1,290,000	9,585	0.7
1984	157,000	10,485	6.7	1,286,000	7,705	0.6

The 1983 semen sales figures (the last year data is available) indicate 176,645 doses of semen were sold in Alberta. These sales include 99,320 doses of dairy semen and 77,325 doses of beef semen.

The Semen Evaluation Laboratory at Airdrie handled 922 samples of semen from various species during the year April 1, 1984 to March 31, 1985 as follows.

Table 3.

SPECIES	1984-85	1983-84	1982-83
Cattle	900	835	866
Horses	-	4	10
Fish	-	-	-
Sheep	1	21	2
Dogs	1	-	-
Swine	15	49	37
Turkeys	-	-	1
Yak	5	10	-
Humans	-	-	2
TOTAL	922	919	918

The number of samples evaluated in 1984-85 was consistent with the previous two years. Samples are evaluated for total sperm count, percent motility, total motile sperm, morphology (percent primary and secondary abnormalities) and percent intact acrosomes.

There were 330 samples submitted from animals suspected of producing inferior quality semen. Of this number, 235 or 71% were considered as being sub-standard. The 592 regular samples had 266 or 45% substandard. A large portion of the regular samples were drawn from young bulls entering the A.I. Studs for the first time and were marginally below the quality guidelines established by our laboratory.

The source of cattle semen and the number of samples which were evaluated are listed on Page 6, Table 4.

Table 4.

Source of Semen	Number of Samples 1984-85	1983-84	1982-83	Number of Sub-standard 1984-85	1983-84	1982-83
A.I. Studs	842	655	661	444	276	300
Inseminating Businesses	15	15	32	9	9	19
Private Breeders	35	46	85	25	23	30
Breed Associations	1	13	-	-	2	-
Alberta Agriculture	1	86	80	-	51	47
Embryo Transfer Businesses	-	-	8	-	-	5
Veterinarians	6	20	-	6	-	-
TOTAL	900	835	866	374	401	484

Four semen producing businesses were licenced in the province, a decrease of one compared to 1983. Three of the licences were issued to produce bull semen and one for boars. The number of licences issued in 1984 under the Artificial Insemination Act showed an increase in inseminating businesses and a decrease in the number of technicians lienced as indicated below:

Table 5.

	1984	1983	1982	1981
Semen Producing Businesses	4	5	5	5
Inseminating Businesses	50	44	50	48
Technician Licences	108	116	126	114
Technician Training Permits	-	-	4	1
Specific Herd Permits	-	4	3	3

D. Beef Breeding

The difficulties in the beef industry have not adversely affected the performance testing (ROP) programs. The continual decrease in participants of the Federal-Provincial program over the past ten years is now being made up by private programs or by programs operating on micro computers. Two micro computer programs were tested by the branch during the year and were enthusiastically received by producers. Interest in bull test stations remained high. Twenty stations operated

this year testing 1630 bulls. The sales conducted after completion of the test were generally good with prices near last years levels.

The difficulties being experienced by the beef cattle and grain industries over the past few years have caused some farmers to look to alternate farm enterprises. Some are choosing to farm game animals. A survey conducted in January, 1985 found 90 farms raising bison. Over half indicated that they intended to increase the size of their herds. Many other farmers have contacted the Department asking for information about raising bison or other game animals. Five farms are raising elk and many others have indicated that they will start as soon as the game farm regulations permit full scale farming of game. A new Wildlife Act was passed by the Legislature in 1984 which allows regulations to be written for game ranching, but none have yet been passed.

Marketing of bison has been a little difficult in the past few years. This was due to a lack of consumer interest, but rather a lack of anyone organized to provide an orderly supply of fresh bison meat. This past year has seen this problem addressed by several firms who are now marketing bison meat wholesale to restaurants or individuals. The price has ranged from $2.50 to $3.30 per pound. The problem now is a shortage of market-ready bison. There are approximately 3500 bison on farms in Alberta, but this number is growing rapidly with every available female going back into breeding herds.

E. Nutrition

Drought conditions in the southern regions of the province created critical feed shortages last year. The major feed supplies affected were hay, straw, greenfeed and silages. Availability of feed grain,

primarily barley, was less of a problem due to the movement of grain into and within the province from non-drought areas.

General snow storms in mid-October forced livestock on to winter feeding programs unusually early. This taxed already short supplies of roughages. Extended periods of temperatures below -20°C in December, January and February increased the needs for feed. A late cold spring and late snow falls further extended the winter feeding period to abnormal lengths.

Nitrate accumulation in drought stressed crops was a major problem last year. Producers were encouraged to feed test early to obtain a proper interpretation of results and to take necessary preventative measures to avoid nitrate poisoning.

Many farmers were forced into the unfamiliar position of buying feed. Semi-trailer loads of hay and straw travelling south on Highway #2 were commonplace throughout the winter. As winter progressed, hay dealers and farmers had to travel further north to purchase hay supplies. By February approximately 200 loads per week, ranging from 17-28 tons per load, were leaving the Peace River area for southern regions of the province.

The feed shortage increased interest in feeding straw to beef cows and alternative feeds to cattle and sheep. Ammoniation of straw, chaff, poor quality hay and silage were also investigated by farmers facing feed shortages.

Some farmers were forced to put livestock on pasture very early, even before there was much evidence of growth. Others, earlier in the winter, were forced to sell-off part of their breeding herds to compensate for low feed supplies.

In general, the 1984-85 winter feeding period was devastating to both farmers and livestock, particularly beef cattle.

Other species, such as dairy cattle, swine and poultry were not as affected by the drought conditions and subsequent feed shortages. Dairymen purchased required roughages, usually of higher quality, early. Swine and poultry producers were less affected due to their greater dependence on grain and commercially prepared feeds.

F. Regional Statements

1. Region I - Lethbridge

1984 was a dry year! Pastures suffered and hay crops were negligible except under irrigation. Many producers chose to reduce livestock inventories rather than purchase higher price hay. Poor pasture and hay shortages will likely lower cow production through higher neonatal death losses and poor reproduction in the spring of 1985.

2. Region II - Airdrie

The beef packing industry has remained in a state of low economic return. This in turn gave periods of poor return to beef cattle feeders. The feed industry in this region was dramatically affected by the opening of a new plant in Linden. This plant took away market share of the high volume feeds (poultry & swine) from other existing plants in the region.

The drought in the summer of 1984 left producers with a lack of feed. This gave feed companies a boost as they were making up differences with range pellets. The drought had other effects in this region. Many herd cutbacks occurred and there were some

total herd eliminations. Also, because of high prices of purchased forage and lack of crops for sale, financially many producers are facing serious problems.

The major positive factor is that the spring of 1985 looks very good weather wise and predictions of lower feed costs make cattle feeding look positive.

The swine industry has looked very grim over the last year. Prices have been below production costs for months. Failures in this industry continue to rise.

The dairy industry also faced a feed shortage but appears to have not seen as much detrimental impact on financial viability.

The technical boom has somewhat leveled off and introduction of new products has slowed considerably.

3. Region III - Red Deer

The past winter proved to be very trying for cattlemen due to its length and low availability of roughages. Prices of feeds were considerably higher than in past years due to dry summer conditions in 1984. Overgrazing of pastures was prevalent and winter rations were barely adequate. This will impact on calving intervals and breeding percentages for this year and next.

Feedlot producers are very concerned about transportation subsidies and feel the crow benefit should be paid directly to producers in order to maintain a viable feedlot industry in Alberta.

One major (7000 head capacity) feedlot went into receivership affecting many other businesses, farmers and livestock feeders.

A new feed mill is to be built in Red Deer - Triple M feeds and Great West feeds have merged and a $2 million mill is to be built by 1986.

4. Region IV - Vermilion

Drought conditions of the previous years had some carry over effect into the 1984 growing season. Soil moisture reserves were low so that plant growth was dependent on immediate rainfall. Spring rainfall was generally good, but isolated areas of the region were deficient so that grass and hay growth was variable. Some areas produced surplus hay while others were deficient. Many producers relied on grain crop aftermath for winter feed. Winter weather struck fast and hard in late October. This prevented baling much of the anticipated feed from grain crops. Farmers were faced with an early winter and less than normal feed in storage. Winter weather was severe and livestock required more feed than in each of the previous four years. The widespread drought conditions in the prairies put a great deal of pressure on the feed stores. Farmers in this region had to compete with those from other areas for available feed. Winter feeding had to extend on into May due to the late break in the winter weather.

5. Region V - Barrhead

Major crops in this region included feed grains and pasture and forage crops. These crops can support many more head of livestock provided the producer is paid a reasonable price for this product. In the last few years, small farm feedlots have been expanding. These feedlots are either backgrounding or finishing locally grown calves. These feedlots have been full in

the last year and are promoting themselves as being a competitive alternative to the large southern Alberta lots.

In early October, snowfall halted fall grazing of pastures and extended the winter feeding period by 2 to 3 weeks. In this region, the hay in storage was sufficiently large that many producers were able to sell excess production. However, hay prices did not skyrocket on a regional basis. Throughout most of the winter, hay traded in the range of $50 to $60 per ton with the price rising substantially in late spring. The costs of moving hay to the south was approximately equivalent to what the producer was paid for the hay. The Drayton Valley district was short of feed due to a large hailstorm and dry conditions. The early snowfall in the Athabasca district abruptly stopped fall harvest and baling of straw. Straw supplies were restricted.

6. Region VI - Fairview

Generally the beef industry in the Peace has remained static. A general trend toward yearling production off grass has become noticeable, and any increase in this direction should be an indication of increasing stability. The Peace country needs a swing away from its cow-calf emphasis. Any increases or stability in the industry will likely hinge on the proper administration and management of the Provincial Grazing Reserves. The costs of grazing livestock on the Provincial Grazing Reserves however, is not cheap in comparison to individual grazing leases on crown land.

Diminishing, slowly but surely, would be the best description for the Peace Region's ewe population. The Peace River Lamb

Association (PRLA) is the binding force which has lessened the decline in sheep numbers. In 1984, PRLA organized 13 shipments of full (230-250 lambs) liners to Lambco in Innisfail. As the Region's ewe flock declines, the organization of shipments also declines. With fewer lambs, full loads cannot be committed and the distance to market makes small shipments uneconomical.

The livestock producers of the Peace are worse off than their contemporaries in Central Alberta. The chief reason for the disparity lies in transportation costs.

II. Programs

A. Record of Performance (ROP)

The Federal-Provincial ROP program was developed for both commercial and purebred producers to assist them in maximizing greater economic returns from their herds and flocks. The ROP program facilitates the identification and selection of breeding animals which express superior performance for economically important and heritable traits.

1. Beef Cattle

a) Home Test

Two hundred and sixteen of the herds enrolled in the Federal-Provincial Beef ROP program representing 11,416 calves submitted data in 1984. The following is a five year summary of herds completing the beef ROP program to the weaning phase:

Table 6.

Year	Herds Completing Weaning Phase
1980	559
1981	480
1982	275
1983	210
1984	216

The continual drop in participants over the past 10 years has slowed. Changes made to the program in 1983 has resulted in less paper work and fewer forms to fill out. Farmers are generally more satisfied with the program. Producers still resisted re-enrolling however, because of uncertainty over the cost recovery policy being discussed by the Federal Department, the lack of estimated breeding values that have been promised in the program and continual reliance on mail to deliver the program which creates unacceptable turnaround time.

Supplementary to the home test program, the beef cattle breeding section provided municipalities with technicians under the ROP Weight Supervision Program to assist farmers with the recording of fall weaning weights and spring yearling weights. Eighteen municipal governments took advantage of this program in the 1984-85 fiscal year. A total of 19,425 calves from 335 herds were supervised in the fall of 1984. Approximately two-thirds of the calves were weighed again in the spring of 1985. The following table is a three year summary of the ROP Weight Supervision Program:

Table 7.

Year	Municipalities	Farms	Calves Weighed At Weaning
1982-83	19	330	22,249
1983-84	17	342	20,070
1984-85	18	335	19,425

b) Bull Test Stations

Nineteen private groups conducted central Bull Test Stations in 1984-85. Approximately 1430 bulls were evaluated

for growth rate from weaning to approximately one year of age at these stations. Eight stations took advantage of branch services of weight supervision and/or calculating, processing and distributing test station results.

The Ellerslie Test Station was again operated by the branch. Two hundred bulls were tested with over 100 other bulls rejected because of lack of space. An auction sale was held at the end of the test in which 68 bulls sold for an average price of $1908.

The following is a three year summary of the bull test stations operating in Alberta:

Table 8.

Year	Total Stations	Number Tested
1982-83	18	1,600
1983-84	19	1,725
1984-85	20	1,630

2. Sheep

a) Home Test

The sheep ROP home test enabled producers to evaluate wether, ram and ewe lamb rates of body weight gain from birth to 50 and 100 days of age. Fifty and 100 day lamb weights were adjusted for age of ewe, sex, and type of birth and rearing (single, twin, triplet, etc) to enable comparisons between lambs. A ewe index based on productivity was also provided.

The number of breeders enrolled on the program increased from 56 in 1983 to 59 in 1984. Slow turnaround time continues to restrain producer enthusiasm for the program.

Generally, commercial producers have dropped off the program but purebred enrollments have increased over the past 5 years. Part of this increase was due to mandatory ROP enrollment for entry to class A shows. Most purebred producers however, now accept the home test program as a useful genetic tool in flock improvement.

The following is a summary of enrollment in the program by breed since 1980:

Table 9.

BREED	1980	1981	1982	1983	1984
Suffolk	1271	1913	1929	1432	2079
Hampshire	369	229	469	421	397
Lincoln	7	----	----	----	---
N.C. Cheviot	187	327	282	244	358
Rambouillet	162	167	217	139	253
Columbia	89	98	177	291	227
Dorset	177	327	99	173	172
Leister	7	----	----	----	14
Corriedale	----	19	30	96	51
Scottish Blackface	13	20	----	----	---
Finnish Landrace	59	247	54	281	---
Other Purebreds	30	39	42	47	---
Crossbreds	592	995	455	404	249
TOTAL	2963	4381	3754	3528	3900

b) Alberta Ram ROP Test Station

The 10th consecutive year of the ram test station was completed in 1984. The rams were again tested at the permanent facility on Olds College Campus. Sheep were entered on test, beginning the last week of February and every two weeks thereafter for three more entry dates.

Thirty-seven breeders entered 203 rams at the station. Lambs were grouped according to entry date and breed and

tested for weight gain for 56 days. Measurements of back fat thickness, wool yield and wool quality were also recorded.

Animals which indexed above 100 for average daily gain and which met rigorous requirements of a culling committee were sold at the test station sale at the College on July 3rd. Seventy-two rams or 35% of those tested, qualified for sale.

The following is a summary of the 1984 test and sale results:

TABLE 10.

BREED	NUMBER TESTED	A.D.G. KG/DAY	NO. SOLD	AVERAGE PRICE	HIGH PRICE
Suffolk	142	.550	51	$376	$1500
Hampshire	23	.484	7	$311	$ 520
Dorset	20	.415	6	$474	$ 775
Rambouillet	14	.451	6	$412	$ 475
N.C. Cheviot	1	.450	1	$450	$ 450
PolyPay	3	.448	1	$500	$ 500

The following is a summary of test results since the first test season in 1985.

TABLE 11.

YEAR	BREEDERS ON PROGRAM	SHEEP TESTED (RAMS)	A.D.G. SUFFOLK	HEAD SOLD	AVERAGE PRICE	TOP PRICE
1975	12	85	.32 kg	45	$223	$ 525
1976	7	70	.36 kg	43	$231	$ 450
1977	14	165	.36 kg	53	$244	$ 500
1978	16	155	.42 kg	57	$275	$1050
1979	17	123	.49 kg	52	$331	$ 675
1980	17	101	.48 kg	44	$323	$ 520
1981	23	102	.48 kg	40	$375	$ 775
1982	28	115	.47 kg	49	$387	$1100
1983	38	173	.514 kg	61	$332	$ 750
1984	37	203	.550 kg	72	$384	$1500

In 1984, for the first time, a wool breeds test was conducted at the Sheep ROP Test Station. After a 15 day warm-up period, rams were sheared and placed on a 120 day test for body weight gain and wool growth. The table below summarizes the results of the test.

BREED	NUMBER ENTERED	A.D.G. 120 DAY TEST TO YEARLING STAGE KG	ADJ. 365 DAY GREASY FLEECE WEIGHT KG	FINENESS SHOULDER	FINENESS BRITCH	ADJ. 365 DAY STAPLE LENGTH MM
Rambouillet	12	.225	9.113	59	57	92
Columbia	10	.227	9.244	56	54	113
Corriedale	1	.199	9.097	54	52	148
PolyPay	2	.187	6.211	55	52	113

B. Alberta Young Sire Proving Program

The Alberta Young Sire Proving Program provides a grant of up to $1,250 per beef bull which has completed a progeny test conducted by a recognized testing agency. Two progeny test groups currently have active programs but no bulls completed a progeny test during the fiscal year.

C. Warble Control Program

Packing plant inspections of carcasses recorded fewer than 2% with warble infestations in 1984. This compares with 5% in 1983, 7% in 1982 and 14% in 1980. Losses to the beef industry due to infested carcasses and production losses are estimated at less than $500,000 in 1984 compared with over $3 million in 1980.

The provincial warble control program provides for inspections of carcasses at packing plants and live animals at markets across the province. The purpose is to identify the sources of infestation across the province.

The Department also pays grants to municipalities to cover 60% of costs involved in local enforcement of warble control regulations. Total costs to the Department are shown below:

Table 13.

Warble Program Costs

1984	1983	1982	1981	1980
$161,159	$149,702	$149,316	$140,143	$131,932

D. Livestock Production Inprovement Program

Funds were made available to Agricultural Service Boards to encourage the promotion of improved livestock production practices in their districts. The Department, through the Rural Services Branch of the Engineering and Rural Services Division, provided 60% of the costs of livestock production improvement projects, these projects were reviewed jointly by the Rural Services Branch and the Beef Cattle and Sheep Branch. Grants were available for the purchase of livestock equipment for rental or loan to producers, and for demonstrations, field days and extension programs to promote new products and practices which will improve livestock production.

Projects included demonstrating pest control products and new forced-use cattle oiler systems for pesticides, intensive rotational grazing systems, growth implant demonstrations, livestock management field days and beef cattle extension meetings.

Table 14.

Livestock Production Improvement Grants

1984	1983	1982	1981	1980
$42,289	$43,730	$69,911	$26,476	$19,753

E. Fair Assistance Program

Alberta exhibitors of breeding stock received grants to assist with costs of showing animals at designated major international class fairs held outside of the province. The purpose is to improve the exposure of Alberta breeding stock in major shows with potential purchasers in the national and international seed stock market. In 1984-85, 291 exhibitors showed an estimated 1040 animals in four international class shows.

Table 15.

Livestock Fair Assistance Program

Grants Paid to Alberta Exhibitors

(Numbers of exhibitors shown in brackets)

Fair	1984-85	1983-84	1982-83	1981-82	1980-81
P.N.E.	30,361 (40)	34,141 (47)	30,120 (40)	36,078 (63)	29,142 (61)
Royal	6,200 (8)	8,290 (14)	12,940 (23)	9,780 (16)	9,300 (61)
Agribition	67,765 (203)	62,945 (186)	50,410 (145)	51,845 (132)	50,085 (127)
Denver	21,000 (40)	30,700 (52)	18,800 (31)	22,200 (32)	17,200 (15)
Brandon	---	2,310 (4)	3,310 (6)	3,685 (8)	---
U.S.A. National Sheep Show	---	1,000 (1)	---	---	---
	125,326 (291)	139,386 (304)	115,580 (245)	123,588 (251)	105,727 (219)

P.N.E.- Pacific National Exhibition, Vancouver
Royal - Toronto Royal Agricultural Winter Fair
Agribition - Canadian Western Agribition, Regina
Denver - National Western Stock Show, Denver
Brandon - Canadian, National Sheep Show, Brandon

F. Black Fly Abatement

In 1984, the Beef Cattle and Sheep Branch assumed responsibility for supervising the program to develop methods for relieving livestock from black fly attacks in areas with identified problems. The program included close cooperation and liaison with the service boards in Improvement District #18 (Lac La Biche) and the County of Athabasca, as well as with the staff from the Department of the Environment and the Environmental Centre in Vegreville.

Activities in black fly abatement included a detailed monitoring of adult fly activities in the Athabasca and Lac La Biche areas, demonstration of the use of cattle oilers in locations where cattle are forced to use them when going to water or salt stations, testing new products and new methods of pesticide application, and a continuation of the application of the larvicide methoxychlor to the Athabasca River. Costs in 1984-85 included a grant of $56,986 to the County of Athabasca for supervising the larvicide program on the Athabasca River.

G. Ration Advisory Service and Feed Testing

A major service provided by the Animal Nutrition Section involved formulating livestock rations and designing feeding recommendations for farmers. This service was primarily based on information obtained from laboratory nutrient analysis of feedstuffs. Analyses from private laboratories were provided by farmers occasionally, but the service functioned largely in conjunction with analyses obtained from the Agricultural Soil and Feed Testing Laboratory (A.S.F.T.L.).

Total Samples Analysed

During the 1984-85 fiscal year, a total of 19,226 feed samples were received for analysis (Table 16). The previous year, 21,022 feed samples were analysed, a decrease of 1,796 samples or 8.5%.

Table 16. Comparison between the number of samples received in 1984 and 1983 fiscal years and the average number received in 1979 to 1984 fiscal years.

Period	Sample Submission Category Regular	Demonstration	Research	Total
1984-85	3,756	2,637	12,833	19,226
1983-84	4,322	2,274	14,426	21,022
Average 1979-84	4,044	2,175	7,394	13,613

Table 17 shows a four year comparison and the breakdown of total analyses into regular, demonstration and research samples. Regular or fee samples, which submitted by either producers or their representatives, were analysed after payment of fees according to a prescribed schedule. Nineteen percent or 3,756 samples received in 1984-85 were classified as regular samples. This was a decrease of 566 samples or 13.1% from the regular samples submitted the previous year, which reversed an increasing trend since 1981. In comparison, the number of feed and plant samples analysed by private laboratories in the province during the same period was 19,700, down considerably from the previous year's total of approximately 30,000. This dramatic decrease was likely due to the shortage of stored forages caused by drought conditions in southern Alberta last year.

Table 17. Breakdown by sample submission classification for the past 4 fiscal years.

Sample Category	1981-82 No.	1981-82 % of Total	1982-83 No.	1982-83 % of Total	1983-84 No.	1983-84 % of Total	1984-85 No.	1984-85 % of Total
Regular Samples	3,219	33	3,833	26	4,322	20	3,756	19
Demonstration Samples	2,137	22	1,994	14	2,274	11	2,637	14
Research Samples	4,337	45	8,630	60	14,426	69	12,833	67
Total Samples	9,693	100	14,457	100	21,022	100	19,226	100

Research samples were those submitted primarily by department staff, but included samples from University of Alberta and Agriculture Canada staff, engaged in research projects that involved Alberta Agriculture staff.

In the 1984-85 fiscal year the number of research samples analysed was 12,833, a decrease of 1,593 (11.0%) from the previous year. Of the 12,833 research samples in 1984-85, 8288 or 64.5% were analysed using near infrared reflectance spectroscopy (NIR). Some of these NIR research samples were for purposes of developing instrument calibration equations. The increase in research samples since 1981 has been primarily a result of NIR analyses and increased involvement of departmental staff in research projects.

Demonstration samples were samples submitted for diagnostic purposes and for demonstrating the value of feed testing to farmers. These samples were submitted primarily by department staff.

In 1984-85, the number of demonstration samples submitted was 2,637. This was an increase of 363 (16.0%) over the 2,274 demonstration samples analysed the previous year.

Frequency of Analyses by Month

The number of regular samples analysed during the 1984 fiscal year peaked in October at 791 (Table 18). This was the same month as last year, but a month earlier than the year before (1982-83). Again in 1984-85 forty-five percent of the total regular samples were received during the months of October, November and December. A similar pattern existed at private laboratories. Department staff continued to encourage farmers to submit feed samples for analysis either to private laboratories or the A.S.F.T.L. as soon as possible.

Table 18. Frequency of 1984 fiscal year samples according to the month received and submission classification

Month	Total	Regular	Demonstration	Research
April	1,040	86	79	875
May	3,155	50	91	3,014
June	445	63	86	296
July	1,780	276	310	1,194
August	3,449	375	381	2,693
September	1,034	569	440	25
October	1,509	791	351	367
November	1,354	603	224	527
December	1,460	283	182	995
January	2,332	363	277	1,692
February	1,477	185	137	1,155
March	191	112	79	0
Total	19,226	3,756	2,637	12,833

Demonstration samples were submitted on a seasonal basis as well, but the peak period occurred in September and the frequency of submissions was relatively constant from July, 1984 to February, 1985.

Research samples were submitted irregularly throughout the year and analysed as time permitted in the A.S.F.T.L.

Although the total number of samples peaked in the same month as last year, an assessment of the frequency of sample submission by feed types (Table 19) indicates that the heavy flow of samples began a month earlier than the peak month for each of the feed types. The annual increase in sample submissions began in September, August and July for grains, roughages and silages respectively.

Table 19. Frequency of regular sample feed types by fiscal year.

Month	Total 1983	Total 1984	Grains 1983	Grains 1984	Roughages 1983	Roughages 1984	Silages 1983	Silages 1984
April	77	86	51	29	16	46	10	11
May	137	50	49	36	77	8	11	6
June	72	63	46	23	19	36	7	4
July	138	276	51	26	71	218	16	32
August	363	375	41	28	284	293	38	54
September	610	569	88	111	466	404	56	54
October	807	791	174	222	518	487	115	82
November	699	603	206	138	430	382	63	83
December	437	283	98	61	296	183	43	39
January	343	363	138	122	155	201	50	40
February	432	185	116	58	264	96	52	31
March	207	112	106	48	79	50	22	14
Total	4,322	3,756	1,164	902	2,675	2,404	483	450

A total of 902 grains, 2404 roughages and 450 silages which represents 24%, 64% and 12% of the total samples, respectively were analysed in 1984-85. This was similar to the year previous.

Types of Analyses Performed

The A.S.F.T.L. offered a variety of nutrient and element analyses in its feed analysis service. A package (also called a regular) analysis of roughages and silages consisted of moisture, calcium, phosphorus, acid detergent fibre, nitrates and pH (silages only). A package analysis of grains consisted of moisture, crude protein, calcium, phosphorus and bushel weight (whole grains only). The distribution of the types of analyses performed was identified by sample submission type (Table 20) and by total numbers of the different analyses for 1981 through 1984 fiscal years (Table 21).

Table 20. Distribution of chemical analyses of Alberta feedstuffs by sample submission - 1984 fiscal year

Analysis Performed	Regular (%)	Demonstration (%)	Research (%)	Total Number of Analyses
Package (regular)	19	14	67	19,226
Carotene	81	19	--	273
Fat	20	46	34	166
Selenium	52	42	6	1,687
Salt	29	71	--	106
Ash	6	2	92	1,022
Copper	25	44	31	1,587
Manganese	23	40	37	1,456
Zinc	23	43	34	1,601
Iron	9	26	65	707
Magnesium	19	27	54	1,173
Potassium	22	25	53	1,121
Sodium	11	8	81	556
Aluminum	4	14	82	369
Molybdenum	18	14	68	402
Sulphur	18	22	60	1,018
Cadmium	75	3	22	75
A.D.I.N.	17	26	57	186
Prussic Acid	100	--	--	3
Lead	97	3	--	58
Boron	2	18	80	522
Nickel	49	34	17	115
Cobalt	11	89	--	9
N.D.F.	--	1	99	952
Lignin	--	33	67	108

Package analysis includes moisture, protein, calcium, phosphorus, acid detergent fibre and nitrates on roughages and silages and pH on silages and moisture, bushel weight, protein, calcium and phosphorus on grain samples.

Table 21. The number and types of chemical analyses on Alberta feedstuffs over the past 4 fiscal years 1981, 1982, 1983 and 1984

Analysis Performed	Fiscal Years 1981	1982	1983	1984
Package (regular)	9,693	12,455	20,395	19,226
Carotene	815	306	380	273
Fat	178	89	144	166
Selenium	1,825	1,811	1,863	1,687
Salt	97	90	78	106
Ash	565	1,027	2,118	1,022
Copper	1,333	2,116	1,804	1,587
Manganese	1,224	1,744	1,802	1,456
Zinc	1,274	2,041	1,805	1,601
Iron	851	1,290	649	707
Magnesium	1,310	1,569	1,408	1,173
Potassium	1,290	1,638	1,144	1,121
Sodium	857	1,153	325	556
Aluminum	1,038	1,229	234	369
Molybdenum	1,017	1,428	380	402
Sulphur	832	1,376	731	1,018
Cadmium	820	1,060	103	75
A.D.I.N.	202	148	100	186
Prussic Acid	7	5	4	3
Lead	831	947	7	58
Boron	912	1,116	223	522
Nickel	724	961	---	115
Cobalt	724	1,379	238	9
N.D.F.	514	1,014	878	952
Lignin	472	120	70	108

Package analysis includes moisture, protein, calcium, phosphorus, acid detergent fibre and nitrates on roughages and silages and pH on silages and moisture, bushel weight, protein, calcium and phosphorus on grain samples.

The different types of special analyses performed remained the same as in previous years. A major interest continued in the area of trace mineral nutrition. Selenium, copper and zinc remained the three trace minerals most often requested.

Ration Recommendations

As in past years general recommendations and comments were included with analytical results of each feed test report. In 1984-85, 1753 regular (Table 22) and 965 demonstration reports (Table 23) for a total of 2718 were printed. Of these, 280 and 58 ration recommendations respectively were given based on the feeds analysed and the species of livestock being fed. The number of ration recommendations as a percent of regular and demonstration reports decreased in 1984.

The requests for ration recommendations from either department staff or farmers usually entailed detailed ration recommendatons for more than one type of animal and level of production. As a result, several rations and alternatives were prepared for each request.

Table 22. Number of ration recommendation requests on regular reports printed for the past fiscal four years.

	1981-82	1982-83	1983-84	1984-85
Number of Regular Reports	1535	1733	1618	1753
		Ration Recommendations		
Species				
Beef	96	156	166	163
Dairy	48	54	54	36
Swine	57	88	67	44
Sheep	10	8	14	11
Horses	16	21	32	21
Poultry	9	2	4	4
Others	7	12	4	1
Total	243	341	341	280
Ration recommendations as a percent of regular reports (%)	15.8	19.7	21.1	16.0

Table 23. Number of ration recommendation requests on demonstration reports printed for the past four fiscal years.

	1981-82	1982-83	1983-84	1984-85
Number of Demonstration Reports	1375	650	792	965
		Ration Recommendations		
Species				
Beef	48	29	30	20
Dairy	40	15	19	13
Swine	23	15	21	12
Sheep	--	3	7	3
Horses	8	--	5	6
Poultry	5	2	3	3
Others	3	8	1	1
Total	127	72	86	58
Ration recommendations as a percent of demonstration reports (%)	9.2	11.1	10.9	6.0

In addition to rations requested at the time feed samples were submitted, a number of ration recommendations were provided after the feed test results were mailed. Also, an increased number of ration recommendations to producers were made based on results obtained from private laboratories. Thirdly, many ration recommendations were made without the benefit of feed test results. These three types of recommendations were not included in the above totals.

H. A.I. Data Program

The A.I. Data Program introduced in 1980 continued with a grant of $1.00 being paid for each insemination reported by a licenced Inseminating Business. A total of $24,212.00 was paid to 37 participating businesses during the year. This program provides an accurate record of all inseminations carried out by licenced technicians with a breakdown by herd, breed, name of sire and an

estimated non-return rate. A statistical summary of the number of sires and inseminations by breed of cattle follows:

Table 24.

Breed of sire	No. Sires	Number of Services 1984-85	1983-84	1982-83
Ayrshire	33	336	278	538
Brown Swiss	33	315	246	340
Gernsey	17	94	171	221
Holstein (B&W)	218	8967	9192	13958
Holstein (Red)	14	148	135	131
Jersey	40	608	672	786
Red Poll	1	1	4	6
Dual Purpose Shorthorn	6	16	29	35
Total Dairy	425	10485	10727	16015
Aberdeen Angus (Black)	102	1197	1425	1191
Aberdeen Angus (Red)	25	437	395	330
Ankina	1	50	3	-
Beefalo	1	1	2	3
Blonde d'Aquitaine	6	14	17	164
Braham	9	51	123	21
Brangus	-	-	20	-
Brown Swiss (Beef)	-	-	-	4
Charolais	92	1014	973	1036
Chianina	15	61	72	97
Galloway (Belted)	-	-	2	-
Galloway	2	16	4	-
Gelbvieh	15	114	102	44
Hays Converter	1	1	8	5
Hereford (Horned)	84	1011	1226	1499
Hereford (Polled)	83	989	1375	1679
Highland	-	-	7	9
Limousin	54	360	439	517
Luing	1	2	-	-
Marchigiana	1	6	4	1
Maine Anjou	18	60	142	184
Meuse-Rhine-Ijssel	2	2	2	5
Mexican Corriente	1	5	1	10
Murray Grey	8	34	42	95
Normande	1	1	3	3
Pinzgauer	12	78	42	66
Piedmont	-	-	-	2
Romangnola	2	6	1	11
Salers	37	541	1	325
Santa Gertraudis	1	5	3	-
Shorthorn	14	62	24	38
Shorthorn (Polled)	7	24	68	60
Simbrah	1	43	-	-

(cont'd)

Breed of sire	No. Sires	1983-84	1982-83	1981-82
Simmental	162	1336	1463	1826
South Devon	1	1	13	7
Tarentaise	9	133	76	26
Tasmanian Greg	1	2		
Texas Longhorn	7	32	28	25
Wasusi	-	-	2	-
Welsh Black	2	2	-	2
Crossbred	1	14		
TOTAL	779	7705	9585	9285
GRAND TOTAL	1204	18190	20312	25300

I. A.I. Schools

The branch discontinued its financial support to A.I. schools at the three agricultural colleges, but remained involved by providing technical assistance at A.I. schools.

J. Prairie Livestock Drought Assistance Program

In response to the summer drought across most of southern Alberta which was further complicated by the early onset of winter, a Prairie Livestock Drought Assistance Program was implemented to provide assistance to cattle, sheep, PMU mare and goat producers in maintaining their breeding herds. This program, which was shared equally by the Federal Government, provided $27.2 million in assistance to 9,973 producers in the areas covered by the program.

South of a line running across the province, approximately from Coronation to Rocky Mountain House, livestock producers received a grant of $30 per eligible cow, heifer and PMU mare and $6 per eligible ewe and doe goat. Most of the area south of a line from Hanna to Didsbury received an additional $18 per eligible cow, heifer and PMU

mare and $4 per eligible ewe and doe goat. The areas that received supplemental payment were those considered to have suffered the most severe drought. In order to retain the full grant, producers were required to retain at least 75% of the breeding stock owned on August 1, 1984 until April 1, 1985.

K. Feed Freight Assistance Program

The province also implemented a Feed Freight Assistance Program with similar objectives to the Drought Assistance Program to provide assistance to drought affected producers outside the area covered by the Drought Assistance Program. This program commenced in the 1984-85 fiscal year and will be completed in the 1985-86 year.

The program provided assistance to a maximum of $30 per ton for hay, straw and cubed or pelleted forage and $12 per ton for silage for feed that was purchased and hauled more than 25 miles. The classes of eligible animals were the same as in the Prairie Livestock Drought Assistance Program, except that PMU mares were not included. The maximum payments per eligible female breeding animal were $25 for cows and heifers and $5 for ewes and doe goats that were owned by the producer on August 1, 1984.

III. Research and Development

The branch's active involvement in research and development continued in the past year. Our staff also became involved with the analysis of data from some projects conducted by staff outside our branch. Some of the project titles which follow were identified in the 1983-84 report. In this case the project spanned two fiscal years. The following is a listing of projects in which branch staff were involved:

A. Growth Implants

1. The comparison of six implant regimes (Compudose 1x, Ralgro 1x, double Ralgro, Ralgro 2x, Synovex 1x and Synovex 2x) and their effect on gain of yearling steers at pasture.

2. The effect of Ralgro implants on the growth, sexual development and carcass characteristics of bull calves implanted at birth and every 60 - 90 days thereafter until slaughter.

B. Reproduction

3. The influence of energy level on conception rate of sows inseminated with fresh or frozen semen using two methods of heat detection.

C. Pest Control

4. Evaluation of two alfalfa cultivars for their bud loss resistance (analysis only).

5. Effect of Ivomec in a dairy and a beef herd on weight gain and on number of lice and intestinal worms.

6. The effect of forced-use insecticide treatment on black fly and mosquito load in beef cattle.

7. Evaluation of Spotton for control of horn flies.

D. Disease Control

8. Evaluation of two trace mineral treatments and two scour vaccines (Vicogen and Trivalent) on the incidence of scours and on growth performance of suckling beef calves.

9. Field evaluation of a new pinkeye vaccine for cattle in Alberta.

10. Regression analyses of a study examining antibody levels in serum (analysis only).

11. The effect of sickness due to pinkeye, footrot and/or pneumonia on pasture gains of yearling steers - Pembina Forage Association Grazing Reserve, 1982 - 84.

E. Nutrition and Management

12. The predictive value of condition score, hip height, initial weight and/or initial weight to hip height ratio for average daily gain in grazing yearling steers.

13. Ongoing work with the University of Alberta on evaluating the intake and digestibility of forages and predicting the feeding value of forages.

14. On-farm project to evaluate canola meal versus soybean meal in dairy rations.

15. Work with A.S.F.T.L. to evaluate the efficacy of near infrared reflectance analysis as a method of predicting intake and digestibility of forages by ruminants.

16. Study regarding on-farm mixing of pig rations.

17. The effect of barley bushel weight and processing method on feedlot performance of finishing beef steers.

18. In co-operation with the A.S.F.T.L., initiated a study to develop a convenient and accurate method for determining acid detergent fibre on grains as a means to more reliably determine the acid detergent insoluble nitrogen values on heated grains.

19. Initiated study to determine the long term effects of feeding canola meal vs. soybean meal to sows.

20. Funded a study to evaluate the nutritive value of hulless barley for young pigs.

21. Evaluation of triticale versus barley for feedlot steers.

22. Economic evaluation of grass versus feedlot finishing of yearling steers.

23. The growth and reproductive performance of preconditioned calves and their dams on the farm and of calves in the feedlot.

24. The effects of early and late weaning on calf gain and on cow growth and reproductive performance.

25. The effect of grain intake and processing on the digestibility of dry matter, fibre and energy of seven alfalfa-barley oats based rations for horses (analysis only).

26. Evaluation of the growth performance of horses at pasture and of 100% alfalfa versus 70% alfalfa plus 30% straw cubes fed to horses at feedlot (analysis only).

F. Forages

27. Intensive rotational grazing systems for yearling steers and cows with calves.

G. Sheep

28. An Evaluation of PolyPay Sheep.

29. Out of season breeding of lactating Columbia, Suffolk x Columbia and Hampshire x Columbia ewes.

30. Electric fencing for predator control in sheep.

31. Raised lambing crates for confinement lambing.

32. Portable lambing facilities for improve the care of lambs and ewes.

33. Lamb milk replacer field trial.

34. Examination of linearity of growth curve by breed of ram for the Alberta Ram Test Station.

35. Examination of index vs price for the Alberta Ram Test Station.

36. A comparison of ultra sonic backfat measurements on live lambs vs chilled carcasses

37. Evaluation of ram test station data from across Canada for the 1975-84 period to determine the relationship between various parameters and growth rate.

H. Others

38. Relationships between average daily gain and feed efficiency using data from the Alberta Beef Test Station, Ellerslie (1981-83).

IV Technology Transfer

Branch staff were involved in enhancing the process of incorporating existing husbandry practices on farms through their extension activities. Producer meetings, personal correspondence and contacts, mass media releases, newsletters, factsheets and on-farm demonstrations were used to distribute livestock information to primary producers, industry, the general public and other government agencies. Technology transfer continued to be the major activity of branch staff.

A. Workshops, Extension Meetings and Field Days

The branch organized and participated in numerous conferences, seminars, meetings, workshops and field days. The branch organized and/or participated as speakers in major events such as the International Symposium on Ruminant Physiology and Metabolism, Managing Agricultural Technology for Profit, Agricultural Electronics Show, Alberta Dairy Seminar, Alberta Pork Congress, Alberta Pork Seminar, Feed Industry Conference, Western Nutrition Conference and the Saskatchewan Indian Association Game Ranching Seminar. The branch

staff also spoke at many local extension meetings which were organized by regional and district staff on all aspects of livestock husbandry. Staff also spoke at several meetings organized by industry and agribusiness.

Several one day or series workshops were organized by the branch. In-service training workshops on livestock pest control, livestock production technology and livestock nutrition, were conducted for agriculture fieldmen, district agriculturists, and other department staff

Workshops, seminars and clinics were also organized for producers, 4-H clubs, industry and agribusiness representatives. Topics included in these events were condition scoring, animal nutrition, livestock judging, beef management, cow and cow-calf management, growth implants and feed additives, sheep shearing and sheep management.

B. Mass Media Presentations

During the past year, branch staff were active in preparing news releases and information articles on various beef and sheep production topics for radio and popular press. Twenty-one articles were prepared for the department's Agri-News, and 10 items for the radio program, Call-of-the-Land. Several articles were prepared for newspapers and trade magazines.

The branch prepared four producer newsletters on a regular basis last year. These were Sheep Notes and News, Sheep Footnotes, Alberta Beef and Alberta Beef Performance Bulletin.

C. Requests For Service

A major component of the branch's extension effort continued to involve responding to individual requests from producers,

department staff, other government departments, municipalities, Agriculture Canada, University of Alberta, veterinarians, private consultants and agribusiness.

Requests ranged from specific to general in nature and and included all topics related to domestic and semi-domestic livestock production.

V Staff Development

Branch staff attended a number of workshops, seminars, courses and professional society meetings during the year. The purpose was to improve personal, professional and managerial skills and to keep abreast of new subject matter developments in the areas of livestock production. The major events attended are listed below:

1. Canadian Society of Animal Science Annual Conference
2. Agricultural Institute of Canada Annual Conference
3. Seminar on Integrated Reproductive Management
4. American Society of Animal Science Annual Conference
5. Canadian Society of Pest Management Annual Conference
6. Alberta Cattle Commission Research Seminar
7. Alberta Forage Seminar
8. Livestock Behavior Workshop
9. Influence Management Seminar
10. International Symposium on Ruminant Physiology and Metabolism
11. Implanting for Growth Conference
12. Western Nutrition Conference
13. Alberta Dairy Seminar
14. Alberta Pork Seminar
15. Effective Public Speaking

16. Orientation for Managers
17. Management Development
18. Effective Writing Workshop
19. Introduction to Business Computers and Lotus 1,2,3
20. Sheep and Goat Health
21. Managing Time Effectively
22. Game Ranching Seminar
23. U of A Feeders Day
24. Canadian Learning Institute Silage Seminar
25. Farming for the Future Research Conference

VI Staff Changes

April, 1984	Cal Mitchell, Sheep Technician (north west) resigned
April, 1984	Bruce McGhan, Sheep Technician (north west) transferred
April, 1984	Susan Hosford, Sheep Technician (north west), hired on contract
May, 1984	Shamin Rajani, Clerk Typist III, resigned
May, 1984	Debbie Forge, Clerk Typist III, promoted
July, 1984	Dwight Karren, Regional Livestock Specialist, Lethbridge, transferred
July, 1984	Trevor Jones, Sheep Technician (Peace region), resigned
Sept., 1984	Dale ZoBell, Regional Livestock Specialist, Red Deer, promoted
Sept., 1984	Trevor Jones, Regional Livestock Specialist, Fairview, hired
December,1984	Ron Weisenburger, Branch Head, promoted
December,1984	Don Scheer, Head, Animal Nutrition, temproary assignment
March, 1985	Sandra Dexter, On-Line Data Processing Operator, resigned

HORSE INDUSTRY BRANCH

Industry Overview

The horse industry in Alberta continues to lead all other provinces in horse numbers, registration and horse related activities with an excess of 40% of the Canadian horse population.

For the third consecutive year, the average price of horses at sales has decreased substantially.

Table 1

Selected Breed Sales

	1981	1982	1983	1984
Quarter Horse	3,285	3,020	2,598	1,497
Thoroughbred Yearling	11,500	9,752	6,054	5,111
Standardbred Yearling	--	7,674	5,627	2,292

Only the superior individuals in each breed are commanding excellent prices.

The markets for pleasure horses are changing in that recreation riders are purchasing horses to perform a function with the intention of the horse being used solely for that; thus, the spread in value between fillies and geldings is very small. Recreation horse owners are not looking for horses that have breeding potential.

Stallion owners for the second consecutive year are experiencing a decrease in mares being booked to their stallions. This is due primarily to the decrease in average prices of young horses to where they are selling for less than the stud fee.

Equitana North America has become established as a premier trade fair for equine products. "Alberta Breeds for the World" was incorporated into Equitana North America as a promotional activity to market Alberta horses.

Alberta has become the primary supplier of Quarter Horses to Europe. This is the result of 8 years concentrated effort by the Alberta Quarter Horse Breeders Group. Exports for superior Quarter Horses and Arabians to the U.S. remain strong.

The price of slaughter horses has decreased approximately 10¢ per pound from 1983 to average about 25¢. The low price is due to the strong Canadian dollar relative to European and Japanese currencies. The Canadian share of the world market continues to decline for the fifth consecutive year.

Education/Advisory Services

The branch, with a permanent staff of three professionals, provides educational and advisory services to horse owners in all areas of the province. The branch has a large and varied clientele which can be divided into primary producers who raise and market horses and horse owners who purchase and use horses for sport and recreation. Although priority is given to the breeding industry, considerable effort is given to providing information on general care and management of horses to horse owners, as a large percentage of these people have no agriculture background and expertise with livestock of any sort.

Extension programs consist of conducting or supporting up to 40 short courses throughout the province, providing speakers for programs conducted by colleges and organizations, as well as on-farm, office and telephone consultations.

The branch prepares technical articles and bulletins for distribution and staff is available as resource people for colleges, veterinarians, district agriculturists, private and public loans officers and other Alberta Department of Agriculture staff relative to horses and the horse industry.

Horse Improvement Program

The Horse Improvement Program is an annual breeders show, designed to identify and recognize superior horses, breeders and trainers in Alberta. A committee consisting of representatives from participating breeds assist with the planning.

In 1984, 50 classes were available for the 14 participating breeds. Six hundred and fifty horses were evaluated during three days of exhibiting, making 1984 the most successful year to date. Results are computerized allowing for breeders to use the program to assist them in making selection and mating decisions. In some breeds, this is the only performance and production records available.

Summary of Horse Improvement Program Entrees

	1981	1982	1983	1984
American Saddlebred	9	6	13	15
Arabian	58	34	98	81
Appaloosa	47	60	65	73
Belgian	16	22	19	31
Clydesdale	16	22	15	27
Hunter	16	31	26	35
Morgan	24	18	27	16
Paint	9	19	23	23
Part-bred Arabian	25	17	24	24
Percheron	26	25	16	21
Pinto	10	23	26	22
Quarter Horse	67	90	71	109
Walkers	-	10	11	17
Welsh Pony	12	27	21	18
Total entries	335	404	455	534
Total horses	424	552	603	704

Travel Assistance

Travel assistance is available to Alberta breeders who have horses that qualify for and participate in recognized breed sponsored national or international championship competitions held outside of Alberta. During 1984, travel assistance of $12,600 was paid on behalf of 34 horses representing four breeds.

Travel Assistance Participation

	1981	1982	1983	1984
Canadian Arabian Championship	N/A	N/A	6	N/A
Canadian National Appaloosa	N/A	49	6	18
U.S. Arabian Championship	5	1	4	3
U.S. Appaloosa Championship	6	-	-	-
Quarter Horse World Championship	18	11	7	7
U.S. Morgan Horse Championship	4	1	-	-
Connemara International Show	-	2	-	-
U.S. National Peruvian Paso Show	-	1	5	6
U.S. National Clydesdale Show	-	7	-	-

Stallion Fertility Evaluation

Horse breeders can, through referral by a veterinarian, have a fertility evaluation of stallions conducted by the branch in cooperation with Olds College. In 1984, 34 stallions were tested.

Market Development Grants

The branch assists in administering Market Development grants of up to $25,000 for provincial horse breed associations. The program was established by the branch in 1978 and funds are allotted from the Agri-food Development Branch budget.

During 1984-85, six breed associations were provided grants totalling $80,534. Projects supported include establishing breeders sales, printing brochures, incentives for successful Alberta bred horses, provincial futurities, participation at trade fairs and general promotion and advertising.

Medication Control

As a service to provincial organizations, the branch conducts drug testing at main horse shows. During 1984-85, 268 horses were tested during 31 days of testing. Two forbidden products were detected resulting in disciplinary action being taken by the Alberta Equestrian Federation and Federation Equestrian International.

Summary of Testing

	1980	1981	1982	1983	1984
No. of shows tested	15	21	16	20	17
No. of days tested	34	39	28	31	31
No. of horses tested	258	441	341	268	390
No. of blood samples	42	119	96	60	98
No. of urine samples	216	342	236	196	283
No. of positive tests	0	1	0	1	2

Research

The branch conducted a horse nutrition research project at Lakeside Research, Brooks, in which the growth rate of young horses related to energy intake was evaluated as well as feed conversions. A digestibility study on hay and grains was conducted at the University of Alberta and equine research at the Western College of Veterinary Medicine was supported.

PORK INDUSTRY BRANCH

The 1984 farm cash receipts from sale of hogs in Alberta were estimated as 261 million dollars, up $60 million from 1983. Total production of pigs for slaughter in Alberta rose by 18% from 1983, and the annual average prices fell to $68.85 in Edmonton from $69.80 in 1983. As a percentage of total farm cash receipts, income from hogs rose from 5.4% in 1983 to 6.6% in 1984 in Alberta. Net exports of pork for Canada rose by 6% compared to 1983. For Canada, 357 million pounds of pork were exported (after deducting imports) and 675,000 live pigs were exported. This is about 25% of Canada's total production, compared to 22% in 1983. Live hog exports from Alberta were estimated as 270,426, or 13.8% of production. Most of Canada's pork exports and almost all of the live hog exports go to the U.S. Because of health restrictions, few live hogs are imported into Canada.

The number of active hog producers in Alberta in 1984 was 6,879. The number of hogs marketed in 1984 were 1,961,700, an average of 285 per producer. On January 1, 1984, the Alberta breeding herd was reported to be 152,000 and on January 1, 1985, it was reported to be 157,500. Total pigs on farms January 1, 1985 was reported as 1,490,000, 5.7% above the year previous.

Alberta's share of Canada's hog production was 13.5% in 1984 as compared to 12.2% in 1983. This is the second consecutive year that Alberta's share of Canada's production increased. It had declined since 1972, when Alberta's share was 20%.

Hog prices were some $0.95 per cwt below the year previous on the average and ranged from $60.55 to $77.59 in 1984 as weekly averages. The range in weekly averages was $17.04 in 1984 compared to $31.35 in 1983.

Matters of concern to the swine industry include packing plant closures, which leaves two major packing plants killing hogs in Alberta. Also conflict between the Pork Board owned plant and the only private plant has been a concern. The threat and imposition of interim countervailing duties on Canadian hogs of $0.038 per lb. and on pork of $0.053 per lb. has been very detrimental to the domestic price, which in turn has resulted in several operations getting out of hogs or going broke. The increase in slaughter capacity in Alberta, due to expansion of the Board owned plant could somewhat alleviate the effect of the U.S. levy. Another major concern is the absence of a price stabilization program for hogs in Alberta, while such is present in many provinces that sell in the same market. Several alternative actions for Alberta hog producers were discussed, but not implemented since a national uniform program for all red meat was favored.

The Pork Producers Market Insurance Program (PPMIP) served to stabilize prices and production in Alberta until September 30 in 1984. It provided a price no lower than $78.90 on a weekly average basis. The fund paid out $21.1 million from April 1, 1984 to December 31, 1984 and took in premiums amounting to $5.6 million. The fund balance declined from about $2.7 million to a $9.5 million deficit during the year. The deficit loan was paid by the provincial government. About 3,400 producers (50%) participated, insuring about 0.8 million hogs this year, 80% of Alberta's total production, while the program was in effect. No insurance was paid for hogs shipped after September 30 and no premiums were paid by producers after December 18, 1984. A federal stabilization payment of $6.54 per hog for fiscal 1983-84 was paid for hogs not insured under PPMIP and $3.61 per hog was paid for hogs that were insured. Those payments helped cash flow in the current fiscal year.

Fund Performance ($,000)

Month	Support Paid by Month	Income-Premiums and Interest
April, 1984	2,783	554
May	2,263	688
June	1,509	586
July	1,158	631
August	1,324	735
September	2,938	614
October	0	669
November	0	648
December	0	460
January, 1985	0	0
February	0	5
March	0	0

The Alberta Swine A.I. Program continued a steady pace of growth in 1984 as in 1983, a trend which shows no sign of slowing down even in the face of depressed market hog prices. Fresh semen sales for the 1984-85 fiscal period were up by 18% at 5164 shipments to 290 customers across western Canada. See Table 1 for a detailed breakdown of semen sales. Alberta producers continued to buy 2/3 of the fresh semen sold. In addition, 889 doses of frozen semen were sold, most of which went to Mexico. Farrowing rates on the first 50 breeding with frozen semen was 54%. Farrowing rates for fresh semen continued to be satisfactory at 75.3% of breedings.

Sixteen swine A.I. short courses and several swine breeding discussion groups were held across western Canada. In addition, four swine A.I. seminars were conducted in Mexico in conjunction with the Alberta Swine Breeders Association (A.S.B.A.) with whom international marketing of frozen semen is being coordinated.

Table I

FREQUENCY OF USE OF A. I. By Producers

April 1, 1984 to March 31, 1985

Province	Total # Producers Using A.I.	Total Doses Purchased	# of Users and Doses Purchased by Size of Purchase: 1-25 #	1-25 Doses	26-50 #	26-50 Doses	51-100 #	51-100 Doses	100+ #	100+ Doses
Alberta	186	3179	145	1047	25	828	13	844	3	460
B.C.	55	1343	43	305	8	278	2	151	2	609
Manitoba	20	255	19	187	-	-	1	68	-	-
Saskatchewan	20	240	17	120	2	60	1	60	-	-
* Others	2	14	2	14	-	-	-	-	-	-
Demo	1	1	1	1	-	-	-	-	-	-
Exp. 2 boar	3	59	-	-	-	-	3	59	-	-
Exp. 4 boar	3	73	-	-	-	-	3	73	-	-
Total	290	5164	227	1674	35	1166	23	1255	5	1069
* Others:										
Yukon	1	4	1	3						
Ontario	1	12	1	11						

During the past year, nine of the sixteen boars on hand April 1, 1984 were replaced. A total of 19 new boars were purchased of which nine were acquired through Agriculture Canada's Sire Loan Policy.

The Swine A.I. Advisory Committee met once during 1984 to address the following items of concerns:

1. Recommended that any boars which showed health or semen quality problems be shipped for post mortem examination.
2. A new Swine A.I. Brochure is in for printing and will serve as a first line contact with the Alberta Swine A. I. Program at functions like Pork Congress or to visitors to the Unit.
3. Initial discussions were begun with A.S.B.A. to develop an International Frozen Semen Sales Policy.
4. No semen price increase was considered necessary.
5. The development of a plan to monitor and control the spread of Porcine Stress Syndrome (P.S.S.) was proposed to the Canadian Swine R.O.P. Advisory Board. Action needs to be taken on a national scale to implement the recommendations.
6. A request for doubling our boar battery to 40 boars went forward as a B budget item for 1985-86.
7. More coordinated extension follow up by A.I. Unit employees and regional specialists in herds using A.I. is considered to be desirable in future to further improve fertility rates with A.I. as considerable between herd variation in fertility results are being observed.

Two major research projects have been completed this past year and results are still being recorded on the first trial, but are at the analysis stage for the second trial.

(a) Field trial at three farms in Lacombe area to monitor the effects of breeding time on conception rate:

18 vs. 24 vs. 30 hours after first observed standing heat using mixed fresh and frozen semen

(b) A joint project was organized with participation from the Lacombe Research Station, the University of Alberta and the A.I. Unit to monitor the effects of sow feed intake levels during lactation on:

(i) Weight loss during lactation

(ii) Backfat loss during lactation

(iii) Conception rate as influenced by:

1. Fresh semen vs. frozen semen
2. Visual estrus detection vs. electronic estrus detection

(c) Time from weaning to beginning of estrus

(d) Reproductive blood hormone levels during estrus

The Swine A.I. Research Committee met to identify and priorize those areas where the A.I. Centre could make useful progress in development of A.I. technology and improvements to the program in future. Major emphasis will be on improving the shelf life of fresh semen and improving the efficiency of processing and the quality of frozen semen.

The Swine Record of Performance (R.O.P.) Program served 94 hog operators directly with testing 19,040 pigs on farms and in test stations

in 1984, a 3% increase over 1983. The majority of the users of this program were seedstock producers who breed and sell breeding animals to other breeders or commercial farms. Those testing over 100 pigs each number 52 herds and account for 90% of those tested. The test station aspect of this program, operated in cooperation with Agriculture Canada, tested 872 boars at the Leduc and Lacombe boar test stations in 1984. At the monthly sales of proven tested boars prices averaged $486.54 per boar, up $36 from 1983.

The program continues to enable breeders to identify leaner and faster growing boars and gilts to use for breeding purposes (see testing summary table). It also makes the superior stock identified available to all producers of swine through published information, and sales of tested stock. Halothane gas was administered to all boars entering the test station to identify stress susceptible boars. Positive reactors included two Yorkshire, three Landrace and two Lacombe boars, all of which died. Littermates on test were castrated and marketed for slaughter. Five evaluations were completed for 60 sires and partial information was obtained for 76 additional sires.

International sales of breeding stock by the Alberta Swine Breeders Association were made to Singapore, Japan, Malaysia and Mexico and amounted to 165 animals at $74,300. Branch staff and A.S.B.A. worked together on several domestic sales including test station sales (267 sold, $130,000), the Pork Congress sales (66 sold, $35,450), and the Lethbridge, Edmonton and Wetaskiwin sales (185 sold, $70,400).

TABLE II

ALBERTA SWINE R.O.P. TESTING SUMMARY

1980 - 1984

	1980	1981	1982	1983	1984
Boars Station Tested					
Number	902	732	872	780	872
Av. Backfat thickness (mm)	17.4	16.6	15.3	15.2	14.0
Av. daily gain (kg)	0.88	0.91	0.92	0.93	0.91
Av. feed conversion	2.55	2.47	2.43	2.46	2.45
Av. age to 90 kg. (days)	152	149	147	148	144
Boars Home Tested					
Number	4,207	4,201	4,750	5,851	6,164
Av. backfat thickness (mm)	14.6	14.4	13.9	13.9	14.1
Av. age to 90 kg. (days)	171	166	162	159	157
TOTAL BOARS TESTED	5,109	4,933	5,622	6,631	7,036
Gilts Home Tested					
Number	9,664	9,778	10,990	11,809	12,004
Av. backfat thickness (mm)	15.7	15.8	15.2	14.8	15.4
Av. age to 90 kg. (days)	174	174	172	167	171
TOTAL PIGS TESTED	14,773	14,711	16,612	18,440	19,040

TABLE III

BOARS HOME TESTED - 1974 - 1984

YEAR	NUMBER TESTED	AVERAGE BACKFAT (mm)	AVERAGE AGE AT 90 KG. (days)
1974	1,260	18.3	181
1975	1,267	17.3	171
1976	1,305	16.5	166
1977	1,965	15.8	163
1978	2,676	15.4	167
1979	3,937	15.0	172
1980	4,207	14.6	171
1981	4,201	14.4	166
1982	4,750	13.9	162
1983	5,851	13.9	159
1984	6,164	14.1	157

TABLE IV

GILTS HOME TESTED - 1974 - 1984

1974	1,579	19.1	188
1975	2,411	18.5	179
1976	3,159	17.8	174
1977	4,390	17.4	172
1978	7,790	16.8	177
1979	9,988	16.0	177
1980	9,664	15.7	174
1981	9,778	15.8	174
1982	10,990	15.2	172
1983	11,809	14.8	167
1984	12,004	15.4	171

HOME TEST DATA

TABLE V

SEEDSTOCK SECTION

71 REGISTERED USERS

	BOARS			GILTS		
	NUMBER TESTED	AVERAGE BACKFAT (mm)	AVERAGE AGE (days)	NUMBER TESTED	AVERAGE BACKFAT (mm)	AVERAGE AGE (days)
Yorkshire	2305	14.0	157	3912	15.2	165
Landrace	569	14.8	155	903	15.8	161
Lacombe	569	14.9	163	663	16.0	167
Hampshire	217	129	169	242	13.5	172
Duroc	295	13.5	162	185	14.8	166
Crossbred	2097	14.1	154	3606	15.7	170
Total	6052	14.1	157	9511	15.5	167

COMMERCIAL SECTION

23 REGISTERED USERS

Yorkshire	15	13.9	195	16	15.1	200
Landrace	-	-	-	-	-	-
Lacombe	6	16.5	169	3	14.2	236
Hampshire	-	-	-	-	-	-
Duroc	-	-	-	-	-	-
Crossbred	91	13.7	180	2474	15.4	184
Total	112	13.9	181	2493	15.4	184

OVERALL TOTALS

	6164	14.1	157	12004	15.4	171

The Pork Production Handbook was continued with 18 additional new fact sheets for a total of 75. These were distributed on request to a list of over 1,300 names. A research review column and a column with questions on nutrition has been produced by the specialists and the monogastric nutritionist. These have appeared in every edition of the Alberta Hog Journal, a quarterly publication.

The Pork Industry Branch staff have participated as resource persons, and helped organize over 25 local extension meetings, seminars and series courses throughout the province this year, with attendance of from 5 to 80 persons at each. In addition, they have been actively involved in the planning and staging of the Alberta Pork Seminar (130 attending), the Alberta Pork Congress (about 3500 attending), the D.A. in-service training course and meetings of the Alberta Swine Breeders Association, the Western Hog Growers Association, the Southern Alberta Hog Producers Association and the Alberta Pork Producers Marketing Board district meetings.

The swine specialists with district agriculturists helped deliver the Pork Industry Branch's swine extension program. Many farm calls were recorded by specialists. These involved questions in nutrition, engineering, herd health, finance, breeding, servicing A.I. and R.O.P. programs, investigations for A.D.C., feed test results follow up, ventilation problems, planning visits and work with local vets, feed company personnel, swine building engineers, regional economists, local district agriculturists and others. Frequently, groups of producers were brought together for joint consultation. Office interviews were recorded by each specialist. These also dealt with the above areas of concern and often served to meet client needs when the need was immediate and a farm

visit could not be scheduled. In the office, swine extension materials were supplied directly and through district agriculturist offices.

Several special activities were undertaken by specialists in each region and these are summarized as follows:

Lethbridge: The Swine Record Keeping Program for province-wide distribution was updated, printed and mailed. A new manual for this program was printed and distributed. This program continues to have a strong demand with 500 distributed to date in the province. Extension Seminars resourced and organized included 22 in Regions I, II and III. Three 6 to 8 week series of seminars were held. An agricultural Lenders Workshop was held. Office interviews and farm calls totalled 148 this year. Client telephone contacts totalled 181, agribusiness contacts were 144 and department contacts totalled 278. The specialist served as a member of the Farming for the Future program review committee and served as acting regional director for four months. Many consultant calls relating to agricultural lending were made. A complete cash flow analysis program was developed.

Two on-farm demonstration trials with Canola meal in swine ration were set up and carried out.

Red Deer: The current regional specialist was on staff two months and handled numerous calls, office and farm visits and some A.D.C. consulting work. Part of the time has been spent on orientation and meetings with district agriculturists, specialists and other Alberta Agriculture personnel. The specialist was involved in the planning of the 11th Annual Pork Congress in June in the exhibits and education committees, as well as setting up a new industrial show case area. He participated in the Green Certificate testing in the swine category.

The previous swine specialist resigned effective August 1, 1984 and the position was vacant for seven months, with specialists from Lethbridge, Barrhead and headquarters as well as other Region III staff meeting Regional III needs.

Vermilion: The swine specialist's position was vacant from August, 1984 to January, 1985. Since January, 1985, farm calls made were 26 and office interviews were 15. Extensive producer and district agriculturist contact was carried out by phone.

Much of the specialist's time has been spent on reviewing A.D.C. loan applications and on the Alberta Agriculture farm counselling program.

A research program using the on-farm demonstration program has been set up studying the alternate use of Canola Meal in growing and finishing rations. Results from the three herds (360 pig test) should be forthcoming in the summer of 1985.

Many new producers and established producers have requested record keeping systems. Promotion of good record keeping is a high priority.

The previous swine specialist produced several fact sheets prior to leaving effective July 1, 1984. The swine specialist needs of the regional were met by headquarters staff and the Barrhead specialist, as well as other Region IV staff during the period of vacancy.

Barrhead: A total of 87 farm calls, 102 office interviews were conducted for Regions V and VI. Other calls were made for A.D.C., for feed test follow-up, for 30 to 40 producers establishing a record keeping system and other requests. Many calls were made to Regions III and IV during the vacancy in the swine specialists' positions. Twelve producer meetings were resourced and/or organized in the region with from 15 to 70 attending each.

Seven out-of-region meetings were attended. The specialist participated in writing of fact sheets, home study courses, other branch and Marketing Board programs and meetings. Two on farm demonstration trials with Canola Meal were set up.

The swine specialist assisted in Green Certificate testing, participated in several Region V activities. He conducted tours for University of Alberta students, worked with local agribusiness and veterinarians, wrote for the Research Reviews column and coordinated contributions to it, and reviewed and wrote several swine fact sheets.

Branch staff members and regional specialists have participated in meetings and activities of the following Advisory Committees: Swine R.O.P. Advisory Committee, Swine R.O.P. Advisory Board (Canada), Swine A.I. Advisory Committee, Alberta Pork Producers Marketing Board Research Advisory Committee, Swine Herd Health Advisory Committee, Alberta Pork Congress Board, Animal Industry Advisory Committee and others.

Other activities involving several staff members have included working with regional extension staff, testing green certificate trainees in swine production, attending industry swine meetings, manning the pork industry display, servicing the swine record keeping system, working with Alberta Veterinary Medical Association re swine production information, University of Alberta re Feeders' Day and a variety of similar activities.

POULTRY BRANCH

I. Industry Overview

Nineteen eighty four has been a relatively stable year for the poultry industry. The egg and turkey sectors continue to operate within a national agency and protest the agency imposed cutbacks, the hatching egg and broiler sectors are operating outside of National Agencies, but these growers still find themselves operating under production cutbacks. In general feed prices, which constitute the largest single factor in the cost of production, have remained nearly constant. Gross returns to producers increased slightly in most categories in 1984, but since January 1, 1985 returns have decreased for broilers and eggs. Quotas have for the most part remained stagnant.

The move to make quotas saleable for the various poultry commodities progressed somewhat during the year. If and when quotas become readily saleable without property there will be some realignment within the industry.

Problems of surplus production still plague the poultry industry. Commercial egg producers saw their levy go to 10¢/doz., largely to remove surplus eggs. Broiler growers opened the new year with burdensome stocks of chicken meat on hand and these stocks have contributed to a subsequent decline in producer prices. There appears to be little hope for quota increases on the part of commercial egg producers (88%), or broiler hatching egg producers (80%), it appears that increases in demand are being more than offset by increased rates of lay on the part of birds presently in the field.

a) Broiler Breeders

The broiler breeder sector of the poultry industry remained at the 80% quota level for this period of time. With the increase in poultry meat production, all egg production was utilized and a few hatching eggs were brought into the province. During the year, this sector held regional meetings in which the formation of a National Agency was discussed. At the annual meeting of the Alberta Hatching Egg Marketing Board, the producers voted in favor of joining a National Agency which will set production levels within Canada and control the importation of hatching eggs and chicks. The Alberta Hatching Egg Marketing Board will have to get the approval of Alberta Agriculture before they can join into a national plan.

Hatching egg producers were successful in negotiating an increase in payment rates during 1984.

b) Eggs

The production of eggs from Alberta decreased during this period from 21,840,000 dozen to 21,060,000 dozen or a decrease of 3.6%. This reduction reflects the reduction of 5% quota that went into effect last year. The movement of eggs into the province showed an increase of 7.7% for a total of 10,860,000 dozen or 210,000 dozen per week to accommodate the market demand for Alberta. The opening of a new retail food chain in the Edmonton area changed the marketing patterns of eggs and poultry products, and it will take some time before adjustments are made. The per capita consumption of eggs showed a slight decrease of 2.3% which may be caused by a weak economy and consumers changing their eating habits.

The commercial egg marketings through registered egg stations were 34.80 million dozens in 1984 compared to 34.89 million boxes in 1983, a decrease of 2.6% showing the quota cutback and reduced total supplies.

c) Broilers

In Alberta chicken production showed an increase of 8.9% for a total of 38.466 million Kg of all chicken, compared to 35.320 million Kg in the year 1983. Chicken disappearance in 1984 was up 5.2%. The year 1984 ended with very high production levels which continued into the first three months of 1985, resulting in very high storage stock levels. This combination resulted in weaker producer prices, lower retail prices, and may result in increased consumption of chicken meat. The trend in Alberta is to move to a greater percentage of the chicken market being served by fresh product as compared to frozen. Cornish, roaster and regular weight ranges recorded production increases. The Canadian per capita consumption registered a 7.8% increase over the period. The Alberta Broiler Grower's Marketing Board voted not to join the National Chicken Agency.

d) Turkeys

The production of Alberta turkey totalled 9.296 million Kg compared to 7.734 million Kg in 1983, an increase of 20.2%. The movement of turkey into the province was above the 1983 level. When we compare the total marketings through registered stations we show 11.748 million Kg compared to 8.671 million Kg in 1983, an increase of 35.4%. This increase in marketings showed up in all weight ranges of turkeys, namely broiler (under 5 Kg) 9.8%, hens (5-8 Kg) 21.9%, and tom turkeys (over 8 Kg) at 36.1%.

The per capita consumption was up slightly to 4.20 Kg compared to 4.06 Kg in 1983.

A major poultry processing firm in Alberta purchased a turkey hatching and processing plant in the province of British Columbia.

II. Branch Programs

A. Administration - To develop and administer regulations, policies and programs relative to the industry under the Livestock and Livestock Products Act.

Poultry Branch programs were related to increasing poultry production, improving efficiency, and thus farm income, and keeping poultry products competitive with other protein sources.

B. Research

For some fifty years the Alberta Department of Agriculture had maintained a poultry research facility at Oliver just outside of Edmonton. This service was brought to an end when the poultry plant was officially closed on March 31, 1985.

The final tests run at the station tested various levels of barley in laying rations. In the rations tested protein and energy levels were maintained at constant levels. Under these circumstances rations containing 20%, 40% and 60% barley performed as well as the control ration with no barley.

The performance of four strains of broiler breeders, including two mini strains were compared. Further tests were run on the progeny of these strains to check their performance both as broilers and roasters. Another test was initiated with Shaver leghorns. The pullets were taken from the growing cages where they had been held at eight hours of light and put into the laying pen on 14 hours of light. Pullets were moved at 16, 17, 18, 19, 20 and 21 weeks. Each group came from the same growing pen and went into the same laying cages. The object of the experiment was to see what effect early lighting had on the numbers of eggs and the size of the eggs produced.

The closing of the Provincial Poultry Plant leaves the University of Alberta in Edmonton as the only avenue for poultry research left in the province.

C. Poultry Health - To prevent and control poultry diseases, to safeguard the public health.

We continued to monitor all breeder flocks and hatcheries, with emphasis on salmonella detection and reduction in cooperation with the Animal Health Division. This program is designed to increase agriculture production by reducing the number and kinds of disease producing organism in poultry and their environment with emphasis on salmonella, because of the public health significance of these organisms. This increased production has led to improved income for the poultry producers of this province.

The poultry health program is broken down into a number of areas. These are:

1. Hatchery Sanitation Program (Fluff Sampling)

Chick fluff samples analyzed were 56 from the Lethbridge area; 296 from the Calgary area; and 378 from the Edmonton area. Turkey fluff samples numbered 3 from the Calgary area and 44 from the Edmonton area. The number of chicken fluff samples increased by 172 over 1983. Turkey fluff samples increased by 5.

The number of chicken flocks represented by fluff samples totalled 1311 indicating a monitoring sampling of approximately 11.2 times for each approved hatchery supply flock. Turkey flock representations totalled 49 indicating approximately 9.8 fluff samples per flock.

The following table gives a complete summary of our work in this program and lists the salmonella isolations which were found in the samples:

Total No. of Tests	Salmonella Isolated	Hatchery
Chicks 730	S. enteriditis	C. Packers
	S. nienstedten (2)	Co Op Calgary
	S. (not typed) (2)	Co Op Calgary
	S. (not typed) (1)	Agnew, Calgary
	S. typhimurium	Co Op Lethbridge
Turkeys 47	S. arisonae	Co Op Edmonton
	S. (not typed)	Chinookbelt
	S. (not typed)	Balls

Total 777

% S. isolations (chickens)	1980	1981	1982	1983	1984
	1.17(8)	1.47(6)	0.79(4)	1.43(8)	0.96(7)

% S. isolations (turkeys)	1980	1981	1982	1983	1984
	nil	nil	10.43(3)	2.38(1)	6.38(3)

2. Chicker Health Program

In 1984, the staff of the Poultry Branch continued to work with all hatching egg shippers with special emphasis on individuals who had salmonella isolations. A complete review of barn clean-out and disinfection, egg gathering and handling was done with problem locations.

Table 1 gives a breakdown of the laboratory submissions for the year. The table shows the laboratory work loads from this program of the Animal Health Division and the activities of the Poultry Branch.

Table 1

	Flock Placements			Type of Submissions			
Territory	Broiler	Egg-Type	Total	Rep	Lay	1st Hatch	Total
1 (Leth. Lab)	21	-	21	19	20	16	55
2 (Calg. Lab)	20	6	26	23	23	25	71
3 (Edm. Lab)	27	2	29	26	28	28	82
4 (Edm. Lab)	25	15	40	31	46	39	116
Total	94	23	117	99	117	108	324

The results of samples taken in Table 1 are given in the following table:

Table 2 Percent Chicken Salmonella Isolations

	Replacement	Brooding	Laying	1st Hatch	Total
No. of submissions	99	-	117	108	324
No. of positive (+)	10	-	29	8	47
% positives -1984	10.1	-	24.8	7.4	14.5
-1983	6.2	-	20.0	2.4	10.0
-1982	1.9	-	14.3	3.6	6.9
-1981	10.4	53.3	18.7	3.1	13.0
-1980	13.6	64.0	35.6	4.3	30.1
-1979	22.0	58.3	24.6	7.6	27.7
-1978	15.8	39.7	27.8	0.8	21.2

Percent salmonella isolations are somewhat higher than 1983, a situation that has prompted some concern.

3. Turkey Health Program

Throughout 1984, most Alberta producers of turkey hatching eggs participated in programs to either maintain or to establish Mycloplasma free breeding stock. The following is a summary of the monitored submissions:

	Flock Placements		Type of Submission			Hatches				Total
Terr.	Heavies	Lights	Rep.	Brooding	Laying	1	2	3	4	
1	-	-	-	-	-	-	-	-	-	
2	1	-	1	2	-	-	-	-	-	3
3	2	1	2	2	4	3	2	2	2	15
4	2	-	2	-	3	1	2	1	1	10
TOTAL	5	1	5	4	7	4	4	3	1	28

4. Hatching Egg Supply Flock Approval

There was a further reduction in the number of broiler breeder flocks and bird numbers from the year before. This reduction was in response to a surplus of this type of hatching eggs in 1982 and 1983, reduced economic activity in Alberta and the tentative agreement with the Alberta Broiler Growers' Marketing Board and the National Chicken Agency. In the area of turkey breeders a slight increase has taken place. The following table gives a clear picture of this sector of our program:

Chicken

	No. of Flocks		Average Flock Size		No. of Birds	
Year	Egg	Broiler	Egg	Broiler	Egg	Broiler
1980	22	89	1752	3778	38,655	336,211
1981	30	88	1643	3926	49,278	345,520
1982	26	106	1979	3822	51,465	405,187
1983	27	90	1976	4040	53,345	363,616
1984	29	94	1988	3412	57,653	320,811

Turkeys

	No. of Flocks		Average Flock Size		No. of Birds	
Year	Lights	Heavies	Lights	Heavies	Lights	Heavies
1980	2	7	4,040	4,380	8,080	30,660
1981	1	6	3,650	3,743	3,650	22,460
1982	-	2	-	6,225	-	12,450
1983	-	2	-	6,900	-	13,800
1984	-	4	-	4,600	-	18,400

5. Poultry

During the past year 5 permits from B. C. for a total of 44,379 S.C.W.L. chicks were received. This compares to 6 permits for a total of 52,000 chicks in 1983.

Nine permits for a total of 16,300 pheasant chicks were received.

I.L.T. reappeared in a commercial laying flock in the Calgary area that was recently thought clean.

Seventeen (17) other I.L.T. disease outbreaks were diagnosed throughout Alberta by the Regional Veterinary Laboratories. Producers were visited by the regional poultry specialist.

Branch staff completed the 1984 "Pesticide Residue in Egg Survey". All samples resulted in insignificant levels of chlorinated hydrocarbons.

Exhibition type poultry were blood tested at the Wetaskiwin and Edmonton (farm fair) shows. Of the approximately 600 birds tested all were negative to S. pullorum.

In cooperation with the Prairie Ornamental Pheasant and Waterfowl Association, a one-day seminar was conducted on incubation techniques for exotic pheasants.

D. Rabbits

Rabbit extension information packages were mailed to 136 enquiries. Eleven individual calls were made to rabbit raisers for various reasons.

Processing figures indicate approximately 11,992 rabbits, mostly fryers, were slaughtered in Alberta in 1984. This figure indicates a decrease of some 24,000 compared to 1983.

E. Economic Studies

There is a continual demand for factual and updated information on costs of production.

The Production Economics Branch has recently become very active in this field, and have been assisted by Poultry Branch personnel in the collection and reviewing of data. An increasing amount of time has been spent with farmers reviewing, and assisting with loan applications. Loan applications also came from A.D.C., F.C.C. and many of the banks asking for reviews and comments. The current upsurge in sales of poultry farms has made a very real increase in staff workload -- often several different loan applications are reviewed before a property is finally sold.

F. Extension

Our role in extension has been to interpret and impart to the industry and to the general public, technical, scientific, economic and general information on poultry production. Throughout the year our staff made 857 farm calls, plus 225 calls to the allied trade. They attended 205 meetings including both industry and Department meetings.

We continue to work with a wide range of producers varying from the large commercial farms to the acreage holders with a few birds. Staff have been requested to speak at meetings varying from the specialized Agriculture Lender's Workshop to small flock seminars and country fairs.

In March, 1985, the Poultry Industry Conference was again held in Red Deer. The Egg Marketing Board, the Hatching Egg Board and the Turkey Marketing Board all held their annual meetings in conjunction with the Conference. There was a very impressive area of displays set up in conjunction with the Conference. The Poultry Serviceman's Workshop held at Lake Louise in October again drew good attendance and good comment. Major poultry shows were held at Calgary, Wetaskiwin and Lloydminster.

G. Statistics

Year	Alberta Agri. Layer (Average/month)	Alberta Agric. Total Eggs Dozen (Average/month)	Reg. Stations 15 doz. boxes	Producer Av. Wt. Price
1983	2,065,690	3,036,670	2,326,000	89.4
1984	1,956,210	2,875,730	2,320,000	97.0

Poultry Eviscerated in Registered Stations

Chicken (Kilograms)

Year	Under 1 Kg	1-2 Kg	Over 2 Kg	Fowl	Ducks	Geese
1983	1,372,000	31,945,000	2,003,000	1,836,000	438	7,178
1984	2,265,000	47,496,000	2,947,000	2,531,000	7,000	8,000

Turkey (Kilograms)

Year	Under 5 Kg	5-8 Kg	Over 8 Kg	Mature	Total
1983	1,784,000	3,605,000	3,185,000	97,000	8,671,000
1984	2,467,000	4,699,000	4,418,000	164,000	11,748,000

Chick and Poultry Production by Type

	1983	1984
*Egg Production	1,977,000	2,287,000
Broiler Chickens	32,661,000	34,498,000
Broiler Turkeys	441,000	317,000
Heavy Turkeys	802,000	736,000

*females only

Licensing

Year	First Receivers	Reg. Egg Grading Stations	Reg. Poultry Stations	Egg Packing Stations	Buy & Sell Rejects	Hatcheries	Custom Killing Stations
1982	3	18	10	5	29	16	-
1983	3	18	10	3	31	14	-
1984	3	20	10	3	26	11	1

Farm Cash Receipts $

	1983	1984
Eggs	45,000,000	46,000,000
Poultry	80,000,000	86,000,000
	125,000,000	132,000,000

REGULATORY SERVICES AND FEEDER ASSOCIATIONS BRANCH

This branch was responsible for the administration of certain Acts and their respective Regulations.

This regulatory function provides a protection service for livestock producers in the following areas:

- Brand inspection services
- Brand registration
- Licensing and bonding of livestock dealers and agents
- Licensing of stockyards and stockyard operators
- Provide for protection of land and agricultural products from livestock running at large
- Conducting investigations of fraudulent trade practices in livestock trading
- Check scales and equipment used in making railgrade settlements on cattle

The Feeder Associations Guarantee Act enables members of feeder associations to acquire financing for the growing and finishing of livestock.

BRAND RECORDING SUMMARY

	Cattle	Horses	Sheep	Total
New Brands Issued	1,534	487	1	2,022
Transfers	661	96	0	757
Certified Extracts	0	0	0	0
Cancelled Brands	380	47	0	427
Brands Renewed	9,968	1,290	6	11,264
Brands Re-issued	113	23	0	136

The number of brands in good standing at December 31, 1984 - 53,116.

Cattle	45,746
Horses	7,357
Sheep	13

A total of 2,129 cattle and 362 horse and one sheep final notices were prepared and mailed in January. In addition, 11,144 cattle, 1,498 horse renewal and 4 sheep renewal notices were received from Computer Services in mid-May, finalized in Stettler and mailed during the later part of June and September.

During the year, a total of 49 livestock auction markets and 54 livestock assembly stations were in operation. In addition, 9 markets were licensed permitting them to hold 5 sales or less during the calendar year, one market was licensed permitting them to hold 10 sales or less during the calendar year, one market was licensed permitting them to hold 9 sales or less during the calendar year, and 4 markets were licensed permitting them to hold a one-day sale only.

During the year, a total of 3,182,153 head of livestock were brand inspected. This was a increase of 137,488 head from the previous year.

Summary of Kinds of Livestock Marketed for Five Year Period

	1984	1983	1982	1981	1980
Steers	1,073,745	1,064,912	1,058,912	997,992	1,008,553
Heifers	829,956	826,477	811,997	713,275	716,571
Cows	410,945	359,595	371,270	337,573	363,820
Calves	527,733	476,268	489,687	443,299	510,889
Bulls	88,441	80,932	86,912	75,892	78,776
Yearlings	209,489	196,573	223,340	275,967	253,509
Buffalo	135	0	0	0	0
Mares	16,318	15,279	14,647	14,689	15,255
Geldings	15,391	15,203	14,615	15,325	17,260
Fillies	2,644	2,650	2,417	2,234	2,061
Stallions	3,985	4,138	4,159	3,716	3,607
Colts	3,169	2,488	2,448	2,208	2,728
Mules	202	150	228	308	369
TOTALS	3,182,153	3,044,665	3,080,632	2,882,478	2,973,398

Comparison of Branded Livestock Inspected for Last Five Years

	1984	1983	1982	1981	1980
Branded Livestock	74.7%	74.7%	73.1%	74.9%	73.5%
Livestock Not Branded	25.3%	25.3%	26.9%	25.1%	26.5%

Summary of Inspections

Year	Terminal Yards	%	Auction Markets	%	Packing Plants	%	Inspection	%
1984			1,920,531	60.4	993,561	31.2	268,061	8.4
1983			1,802,681	59.2	1,035,047	34.0	206,937	6.8
1982			1,843,342	60.0	1,034,254	33.6	192,623	6.4
1981	366,379	12.7	1,312,403	45.5	997,101	34.6	206,073	7.2
1980	511,702	17.2	1,320,329	44.4	980,416	33.0	162,642	5.4

Permanent Brand Inspectors

	# of Inspectors		Lstk. Inspected		Lstk. Insp. Per Man	
Location	1984	1983	1984	1983	1984	1983
Brooks	2.63	2.44	234,716	256,816	89,245	105,252
Calgary	7.00	7.13	416,559	475,436	59,508	66,681
Clyde	2.31	2.14	163,901	136,489	70,952	63,780
Edmonton	10.06	11.31	352,532	353,391	35,042	31,346
Grande Prairie	2.00	2.00	50,904	40,124	25,452	20,062
Hardisty	1.44	1.45	103,026	95,357	71,545	65,763
Lethbridge	5.47	6.59	460,681	462,136	84,220	70,127
Lloydminster	2.00	2.00	90,708	79,641	45,354	39,821
Medicine Hat	1.48	2.00	73,995	65,000	49,996	32,500
Ponoka	3.70	4.15	184,816	158,781	49,950	38,261
Red Deer	4.73	4.61	307,332	252,464	64,975	54,764
St. Paul	1.10	1.11	21,937	16,458	19,942	14,827
Strathmore	1.00	1.00	86,204	49,363	86,204	49,363

During 1984, our brand inspection staff questioned 126,199 head of livestock for bills of sale and held the proceeds on another 27,303 head pending proof of ownership. The proceeds on 9,113 head were released to others than the contributor.

Investigations in 1984 resulted in requests for computer retrievals on brand information and as a result, 321 names and 1,556 brands were pulled.

Cattle Exports - 1984

Month	B.C.	Sask.	Man.	Ont.	Que.	USA	Others	Total
Jan.	2,115	2,874	165	8,681	433	4,833	263	19,364
Feb.	2,420	3,476	301	9,636	26	4,717	844	21,420
Mar.	1,925	4,870	316	16,079	-	5,788	-	28,978
Apr.	2,674	5,109	537	9,719	202	5,666	92	23,999
May	3,229	5,795	2,799	3,940	90	6,911	-	22,764
June	2,991	3,620	367	4,630	-	11,557	-	23,165
July	2,906	3,438	625	6,738	2	18,583	49	32,341
Aug.	3,205	2,987	67	10,540	496	16,404	-	33,699
Sept.	1,297	3,033	68	10,091	1,503	12,123	2	28,117
Oct.	2,172	4,259	1,562	32,686	3,435	6,865	85	51,064
Nov.	2,155	4,715	1,204	43,701	2,112	5,873	249	60,009
Dec.	1,157	3,435	1,748	8,640	604	3,942	51	19,577
1984	28,246	47,611	9,759	165,081	8,903	103,262	1,635	364,497
1983	19,407	38,471	2,262	166,426	9,210	60,860	5,514	302,150

During 1984, 498 missing or stolen cattle reports were received. Following is a summary of these reports for the last three years:

Missing or Stolen Cattle Reports

	1984	1983	1982
Total Number of Report	498	492	444
No. of Head Reported			
Missing or Stolen	1,303	1,275	1,584
No. Found	373	236	481
No. not Found	930	1,039	1,103

Under the Stray Animals Act, 1,001 head of livestock were impounded during the year. A total of 888 head were returned to the rightful owners after they paid the costs of capture, transportation and maintenance. The balance of 113 head were sold by public auction and the net proceeds after costs were deposited into general revenue.

There were 941 livestock dealers and agents licensed during 1984 compared to 912 the previous year. One claim was received against one livestock dealers' bonds during the year.

Four branding demonstrations were conducted in various parts of the province with good local participation.

Feeder Associations in Alberta

1983 - 84

During the year, 37 feeder associations operated under the Feeder Associations Guarantee Act.

During the fiscal year $39,626,821.65 worth of credit was used to purchase 91,497 cattle and 4,517 sheep by 37 feeder associations. The amount outstanding as of August 31, 1984 was $22,395,655.66.

Following incorporation in the summer of 1983, Paddle River Feeders Co-op Ltd. filled the gap left by the insolvency of the Mayerthorpe Feeders Association. Litigation continues in attempt to recover funds paid into court as a result of a sale of contested Mayerthorpe Feeder Association livestock.

Knee Hill Valley East Feeder Association faced with very little activity voted to suspend activities for a 12-month period.

Serious financial difficulties threaten the existence of Innisfail Feeders Association at this time.

A number of associations continue to have administrative problems with bred/breeding heifers and cows in calf situation.

Recognizing the need to more adequately identify cattle to specific contracts, many associations move to individual number brands on members' livestock.

1983/84 Feeder Associations

Year End Report

Association	Cattle	Sheep	Total Credit
Acme	2,015		877,493.55
Andrew-Willingdon	773		307,662.28
Barrhead	6,008		2,854,872.36
Bashaw	808		325,147.48
Battle River	4,403		2,116,654.87
Big Valley	1,448		648,435.47
Blindman	9,170		3,743,268.92
Bonnyville	1,192		509,569.86
Bowden	4,123		1,771,274.18
Carstairs	1,364		564,171.58
Colinton	1,209	137	550,941.58
Delburne	845		462,787.42
East Olds	3,510		1,274,871.93
Flagstaff	2,879		1,294,537.23
Fort Macleod	427	1,647	153,491.75
Glenwood	2,084		830,296.79
Grande Prairie	902		388,093.63
Great West	847		340,592.00
Hardisty	4,851		2,065,697.51
Innisfail	1,804		828,527.68
Knee Hill Valley E.	418		213,241.01
Lakeland	1,516		622,550.10
Little Bow	1,695		719,546.13

Association	Cattle	Sheep	Total Credit
Mannville	1,077		415,736.81
Marwayne	4,118		1,870,498.74
Mayerthorpe	1,853		818,625.30
McLeod River	-		-
North Peace	2,574		1,045,746.93
Parkland Stavely	2,244		1,021,748.68
Pincher Creek	1,104		454,538.02
Ponoka	495		260,391.83
Prairie River	1,377		588,789.35
Raven	5,589		2,399,354.78
Red Deer	9,106	4,380	4,177,852.15
South Eastern	869		374,790.02
St. Paul	648		268,975.34
Westlock	6,152		2,506,048.39
TOTAL (1983/84)	91,497	4,517	39,626,821.65
(1982/83)	75,917	5,895	32,585,619.30

Summary of Feeder Association Operations

1979 - 1984

Feeding Season	No. of Assn.	Cattle	Sheep	Amount of Credit
1979 - 80	37	56,312	2,923	27,315,695
1980 - 81	37	63,151	3,441	28,157,530
1981 - 82	38	68,710	4,080	27,761,209
1982 - 83	33	75,917	5,895	32,585,619
1983 - 84	37	91,497	4,517	39,626,822

Staff Changes

Randy Schmidt joined the brand inspection staff at Lethbridge and Rocky Houff resigned at Medicine Hat.

Melvin Seely retired after 27 years of service. Peter Enns who had been on staff since November 1965 passed away February 20/84. Lyle Doan who was on staff since June 1966, due to illness went on long term disability.